

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claim 1 (Currently Amended): A method of monitoring a temperature ~~condition~~  
conditions, comprising:

inputting a light pulse into a fiber optic cable;

receiving a reflection signal that arises from said input light pulse in said fiber optic cable; and

determining ~~a temperature condition along~~ temperature conditions on different portions of the fiber optic cable and a location of the temperature condition along the fiber optic cable based on said reflection signal, wherein said determining comprises performing a comparison for each of said different portions of the fiber optic cable.

Claim 2 (Currently Amended): The method of claim 1, wherein said determining comprises determining said temperature conditions ~~condition and location~~ based on an amplitude ~~and return time~~ of said ~~return~~ reflection signal.

Claim 3 (Currently Amended): The method of claim 1, wherein said comparison is performed with respect to ~~determining comprises determining said temperature condition based on at least one of~~ a threshold value corresponding to one of said portions ~~and a comparison signal.~~

Claim 4 (Currently Amended): The method of claim 3, further comprising adjusting ~~at least one of~~ said threshold value ~~and comparison signal~~ to detect different temperature conditions in said fiber optic cable.

Claim 5 (Currently Amended): The method of claim 1, further comprising determining a location of one of said ~~different~~ portions of the fiber optic cable based on ~~different~~ a return times time of said reflection signal.

Claim 6 (Cancelled)

Claim 7 (Currently Amended): The method of claim ~~6~~ 26, further comprising adjusting ~~each of said corresponding at least one of said threshold value and said~~ comparison signal to detect different temperature conditions ~~among said different portions of~~ in the fiber optic cable.

Claim 8 (Currently Amended): The method of claim ~~4~~ 5, further comprising determining said location by determining at least one of a location relative to an overall length of the fiber optic cable, and an absolute distance from one end of the fiber optic cable.

Claim 9 (Currently Amended): The method of claim 1, further comprising determining at least one of a temperature duration and a temperature progression of said temperature ~~condition~~ conditions over a predetermined time interval.

Claim 10 (Original): The method of claim 1, further comprising generating a signal to initiate at least one of an alarm, a safety measure and a corrective measure.

Claim 11 (Currently Amended): The method of claim 4 ~~5~~, further comprising:  
correlating said location of one of the temperature ~~condition~~ conditions along said  
fiber optic cable with a spatial location of an area occupied by said fiber optic cable; and  
displaying on a display the spatial location of the area occupied by said fiber optic  
cable.

Claim 12 (Currently Amended): A method of monitoring a temperature conditions  
~~condition~~, comprising:

step for inputting a light pulse into a fiber optic cable;  
step for receiving a reflection signal that arises from said input light pulse in said fiber  
optic cable; and  
step for determining ~~a temperature condition along~~ temperature conditions on  
different portions of the fiber optic cable ~~and a location of the temperature condition along~~  
~~the fiber optic cable~~ based on said reflection signal, said step for determining including a step  
for performing a comparison for each of said different portions of the fiber optic cable.

Claim 13 (Currently Amended): The method of claim 12, wherein said step for  
determining comprises determining said temperature conditions ~~condition and location~~ based  
on an amplitude ~~and return time~~ of said ~~return~~ reflection signal.

Claim 14 (Currently Amended): The method of claim 12, wherein said step for  
determining comprises determining said temperature ~~condition~~ conditions based on at least  
one of a threshold value and a comparison signal corresponding to one of said portions.

Claim 15 (Currently Amended): The method of claim 14, further comprising step for adjusting ~~at least one of~~ said threshold value ~~and comparison signal~~ to detect different temperature conditions in said fiber optic cable.

Claim 16 (Currently Amended): The method of claim 12, further comprising step for determining a location of one of said ~~different~~ portions of the fiber optic cable based on ~~different~~ a return times time of said reflection signal.

Claim 17 (Cancelled)

Claim 18 (Currently Amended): The method of claim ~~17~~ 14, further comprising step for adjusting ~~each of said corresponding at least one of said threshold value and said~~ comparison signal to detect different temperature conditions ~~among said different portions of~~ in the fiber optic cable.

Claim 19 (Currently Amended): The method of claim ~~12~~ 16, further comprising step for determining said location by determining at least one of a location relative to an overall length of the fiber optic cable, and an absolute distance from one end of the fiber optic cable.

Claim 20 (Currently Amended): The method of claim 12, further comprising step for determining at least one of a temperature duration and a temperature progression of said temperature ~~condition~~ conditions over a predetermined time interval.

Claim 21 (Original): The method of claim 12, further comprising step for generating a signal to initiate at least one of an alarm, a safety measure and a corrective measure.

Claim 22 (Currently Amended): The method of claim ~~12~~ 16, further comprising:  
step for correlating said location of one of the temperature ~~condition~~ conditions along  
said fiber optic cable with a spatial location of an area occupied by said fiber optic cable; and  
step for displaying on a display the spatial location of the area occupied by said fiber  
optic cable.

Claim 23 (New): The method of claim 1, further comprising detecting and  
recognizing a temperature increase, said temperature increase being characteristic of a faulty  
escape of air from an aircraft pipe system.

Claim 24 (New): The method of claim 23, wherein said aircraft pipe system is a  
pressurized air system configured to deliver hot pressurized bleed air from an aircraft engine.

Claim 25 (New): The method of claim 1, further comprising detecting a break of said  
fiber optic cable with an end reflection signal, a portion of said cable between said break and  
said optical receiver remaining functional for monitoring a temperature condition.

Claim 26 (New): The method of claim 1, wherein said comparison is performed with  
respect to a comparison signal corresponding to one of said portions.

Claim 27 (New): The method of claim 3, further comprising allocating different  
thresholds to different portions of the fiber optic cable.

Claim 28 (New): The method of claim 3, further comprising allocating different  
thresholds to different ranges of a transit time of said reflection signal.